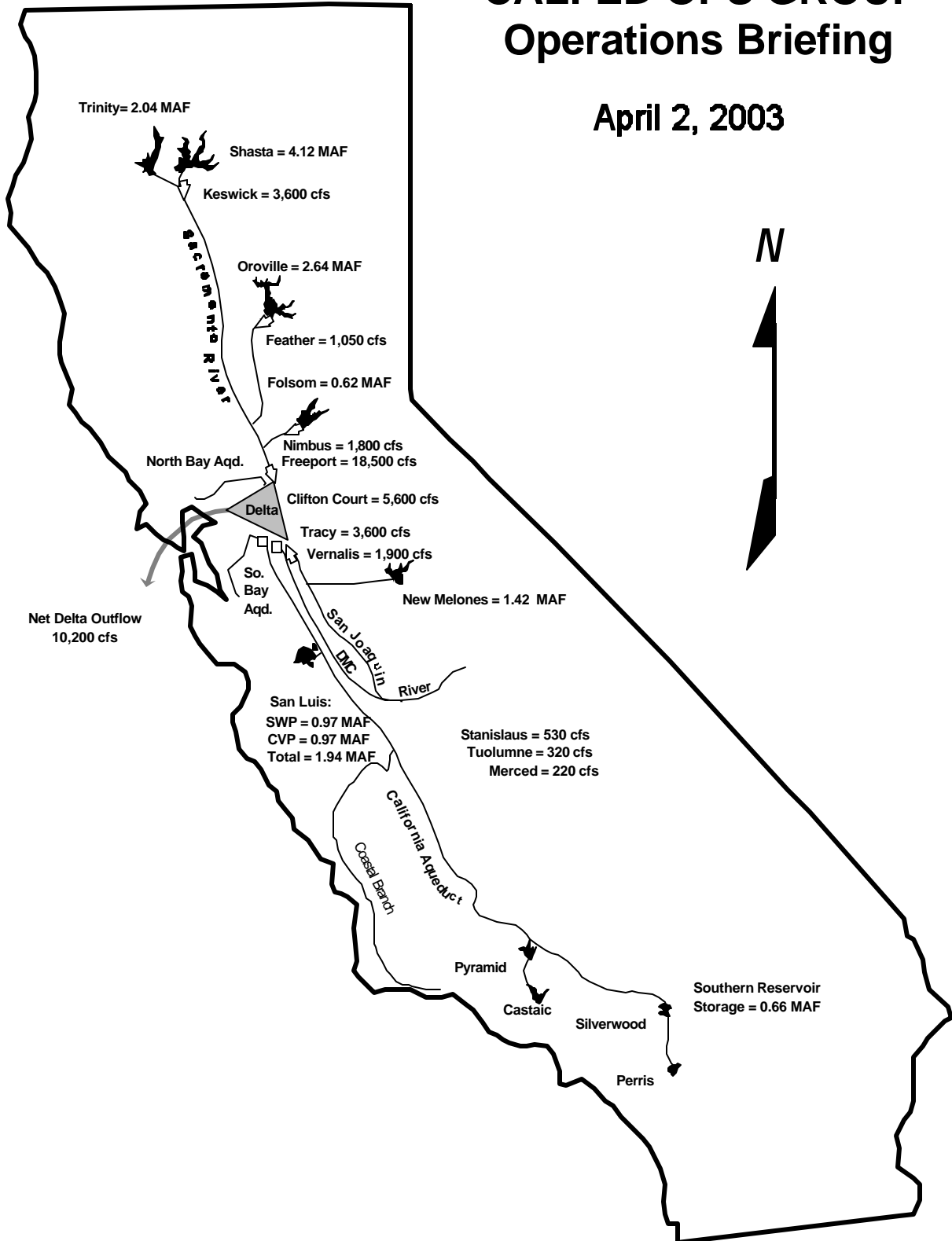


CALFED OPS GROUP Operations Briefing

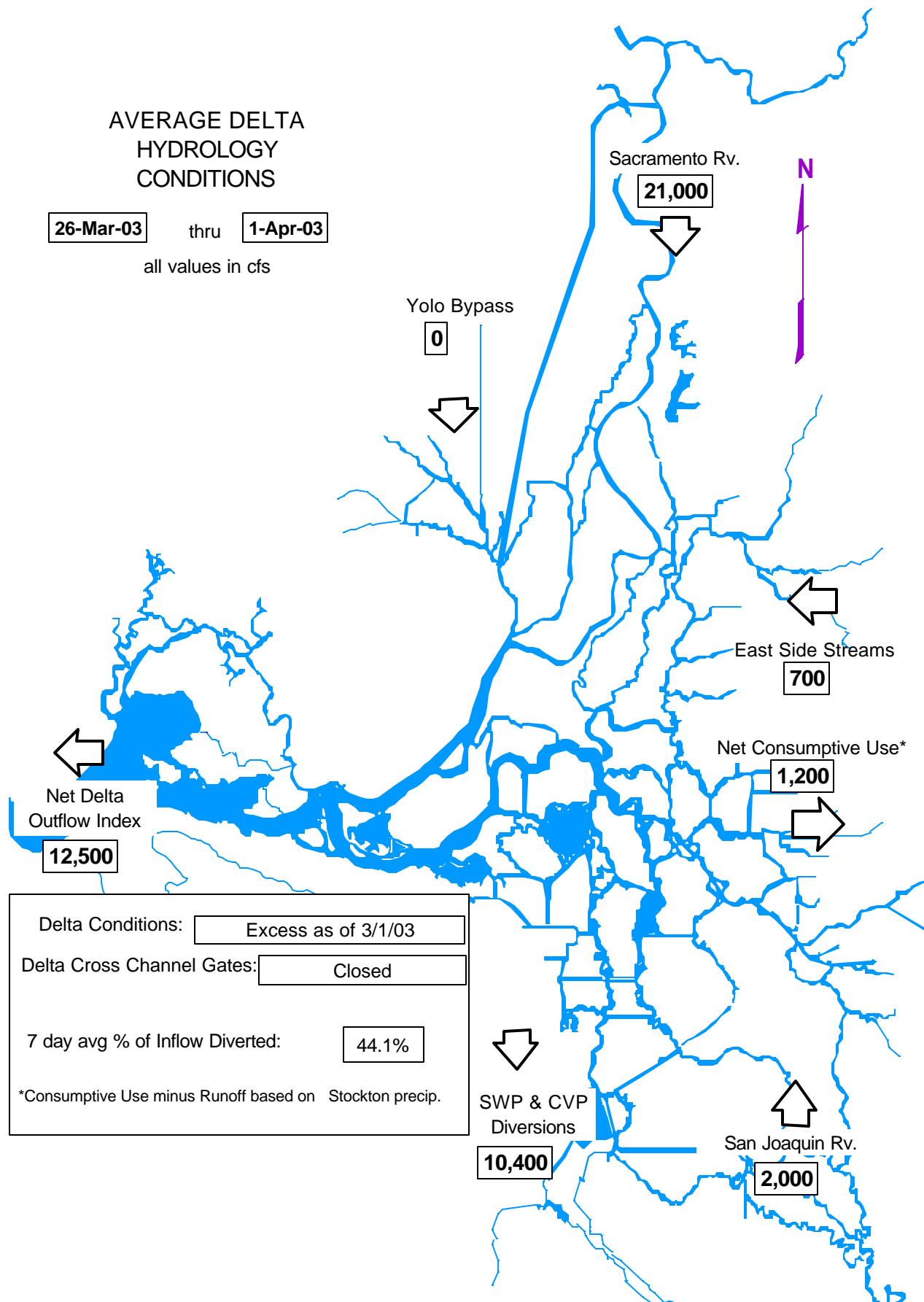
April 2, 2003



AVERAGE DELTA HYDROLOGY CONDITIONS

26-Mar-03 thru **1-Apr-03**

all values in cfs



AVERAGE DELTA WATER QUALITY CONDITIONS

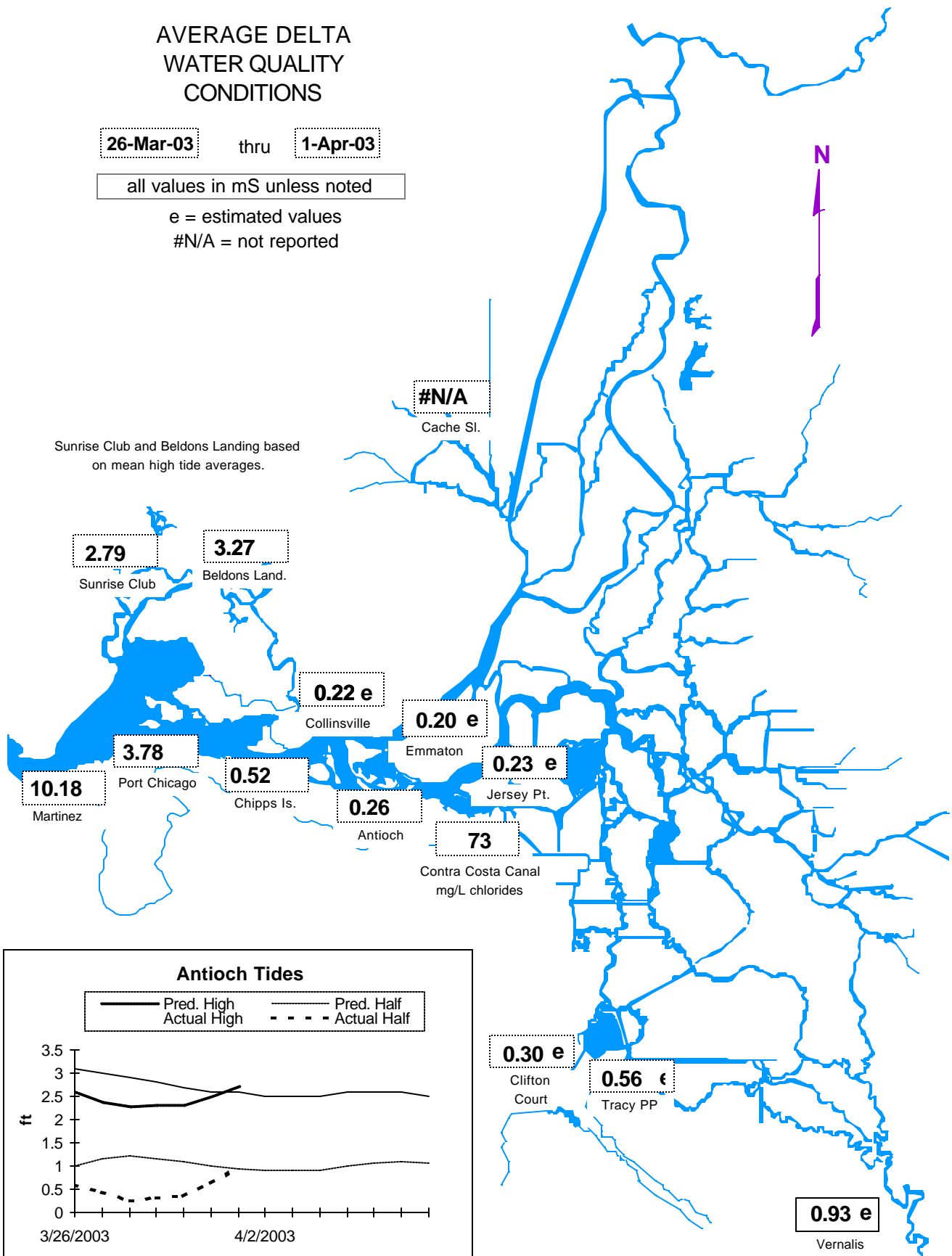
26-Mar-03 thru **1-Apr-03**

all values in mS unless noted

e = estimated values

#N/A = not reported

Sunrise Club and Beldons Landing based
on mean high tide averages.



DRAFT

Bay-Delta Standards

Contained in D-1641

DRAFT

CRITERIA	Apr 2003	May 2003	Jun 2003
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FLOW/OPERATIONAL

<ul style="list-style-type: none"> Fish and Wildlife SWP/CVP Export Limits Export/Inflow Ratio Minimum Outflow - mon. - 7 day avg. Habitat Protection Outflow, X2 River Flows: @ Rio Vista - min. mon. avg. - 7 day average @ Vernalis: Base -min. mon. avg. - 7 day average Pulse objective - mon. avg. Delta Cross Channel Gates 	Greater of 1,500 cfs or 100% of the 3-day avg. flow at		
	35 % of Delta Inflow		
	7,100 - 29,200 cfs or X2 days (through June)		
	1420 cfs	1420 cfs	
	1136 cfs	1136 cfs	
	3200 cfs, per VAMP		
	Closed	14 days per Op's Group	

WATER QUALITY STANDARDS

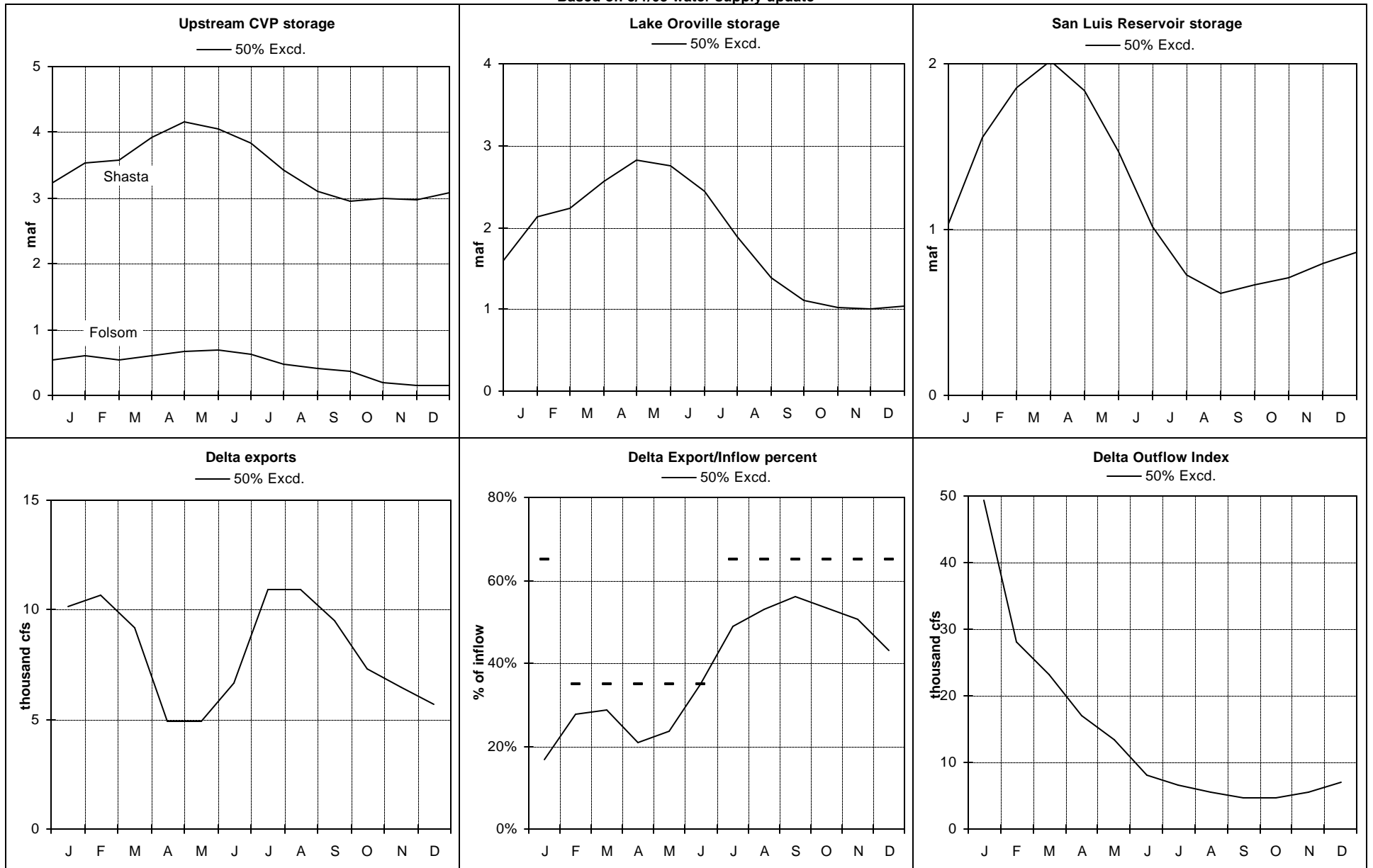
<ul style="list-style-type: none"> Municipal and Industrial All Export Locations Contra Costa Canal 	Cl <= 250 mg/l		
	Cl <= 150 mg/l for 175 days for Below Normal Year Type		
<ul style="list-style-type: none"> Agriculture Western/Interior Delta Southern Delta 	Max. 14-day average EC mmhos/cm: 0.45 mS/cm for Wet year		
	30 day running avg. EC <= 0.7 mS/cm	30 day running avg. EC <= 0.7 mS/cm	30 day running avg. EC <= 0.7 mS/cm
<ul style="list-style-type: none"> Fish and Wildlife San Joaquin River Salinity Suisun Marsh Salinity 	14-day avg; 0.44 EC		
	11.0 mhtEC		

Water Year Classification: Below Normal (Based on forecast, 3/1/2002)

SRI (40-30-30 @ 50%) = 7.1 MAF

SJV (60-20-20 @ 75%) = 2.1 MAF

Based on 3/1/03 water supply update



Flows are monthly averages.

WY 2002/2003 EWA Accounting Summary
Based upon March 1 - 90% Exceedence Hydrology (EWA Backstop)

Assumptions: SWP Allocation ~ 50%; NOD Purchases - 126 TAF; SOD Purchases - 93.7 TAF; MWD SS - 4 TAF; SLR storage is @ 139 TAF (with EWA case) for lowpoint (August)

EWA NOD and SOD Storage																	
1	C/O	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
NOD ⁰	27 ^{*3}	1.7 ³	0.7 ³	6 ⁵						65 ⁶	55 ⁶						128
SOD	37 ⁴																0

EWA Asset Acquisition in SWP San Luis																	
2	C/O	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
E/I Relaxation							41										41
EWA share of SWP gain																	0
Project Pumping to reduce EWA debt																	0
JPOD using excess flows																	0
JPOD using NOD storage																	0
Xfer NOD - Sacramento River ²											5 [*]	5 [*]	21 ^{*5,6}				32
Xfer NOD - San Joaquin River ²																	0
SOD SWP Surface/GW Purchases									37 ⁴		31 ⁷	31 ⁷	31 ⁷				130
Exchange of EWA assets																	0
Groundwater pumping SOD																	0
Exchange from CVP to SWP in SL																	0
Total Monthly EWA Assets		0	0	0	0	0	41	0	37	0	37	37	52	0	0	0	203

EWA Asset Acquisition in CVP San Luis																	
3	C/O	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
E/I Relaxation																	0
Project Pumping to reduce EWA debt							6										6
JPOD using excess flows																	0
JPOD using NOD storage																	0
Xfer NOD - Sacramento River ²				0.5 ³							32 ^{5,6}	32 ^{5,6}	20 ^{5,6}				86
Xfer NOD - San Joaquin River ²																	0
SOD CVP Surface/GW purchases																	0
Exchange of EWA assets																	0
Groundwater pumping																	0
Exchange from SWP to CVP in SL																	0
Total Monthly EWA Assets	0	0	0	1	0	0	6	0	0	0	32	32	20	0	0	0	91

EWA Expenditures at the Export Pumps																	
4	C/O	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
SWP export cuts ⁹				-32 ¹⁰	-90 ¹¹			-13	-10								-144
CVP export cuts									-25	-60							-85
Total Expenditures	0	0	0	-32	-90	0	0	-13	-35	-60	0	0	0	0	0	0	-229

EWA End-of-Month Incremental Storage Changes																	
5	C/O	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
SWP in SL (without Source Shift)	11	0	0	-32	-90	0	41	-13	27	0	37	37	52	0	0	0	70
CVP in SL	-6	0	0	1	0	0	6	0	-25	-60	32	32	20	0	0	0	0
NOD Storage ¹²	24	2	1	1	-2	0	0	0	0	65	8	-47	-52	0	0	0	0
Groundwater SOD	37	0	0	0	-37	0	0	0	0	0	0	0	0	0	0	0	0
Total Incremental Storage Changes	62 [*]	2	1	-31	-128	0	47	-13	2	5	77	22	21	0	0	0	70

EWA End-of-Month Storage Balance at Various Sites																	
6	C/O	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
SWP in SL (without Source Shift)	11	11	11	-21	-111	-111	-70	-83	-56	-56	-19	17	70	70	70	70	
CVP SL	-6	-6	-6	-6	-6	-6	0	0	-25	-85	-53	-20	0	0	0	0	
NOD Storage	24	26	27	28	26	26	26	26	26	91	99	52	0	0	0	0	
Groundwater SOD	37	37	37	37	0	0	0	0	0	0	0	0	0	0	0	0	
EWA Asset Balance	62 [*]	64	64	34	-90	-90	-44	-57	-55	-50	27	49	70	70	70	70	

San Luis Reservoir Storage Conditions																	
7	C/O	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Total Storage (base case) ⁸		645	783	1037	1554	1856	2023	1696	1229	748	384	143	160	261	424	638	
Encroachment																	
Total Storage (EWA case)		650	788	1010	1438	1739	1954	1613	1148	607	312	139	229	331	494	708	
MWD Source Shifting												4				-4	
Storage (with MWD source shifting)		650	788	1010	1438	1739	1954	1613	1148	607	312	143	233	335	498	708	

⁰ 2002 NOD Purchases = 135(YCWA) + 10(SGA). 2003 NOD Purchases = 185(YCWA) + 10(OWID). YCWA has firm 55 TAF; can exercise options for an additional amount (at present - another 65 (10+55) TAF).

^{*} The SWP was able to back 20 TAF of water for the EWA into Lake Oroville between September 14 and 30, 2002 (which includes a 20% carriage water loss).

Since EWA water was backed up into Lake Oroville, then the amount of available water south of the Delta is reduced. SOD equivalent = 16 TAF (not a 1:1 Exchange).

¹ Aqueduct conveyance and evaporation losses are not included.

² Carriage water loss applies to water transfers from the Sacramento River; a 10% conveyance loss applies to water transfers from the San Joaquin River.

A carriage water loss of 20% was applied to the 2002 water transfers.

³ 2002 SGA Transfer (CVP place of use). Exchange of EWA capacity during the summer for the CVP is pending. ⁴ 2002 KCWA Transfer (SWP place of use)

⁵ 2003 OWID Transfer (Joint place of use) ⁶ 2003 YCWA Transfer (Joint place of use) ⁷ 2003 KCWA Transfer (SWP place of use)

⁸ Based upon the 3/10/2003 DWR's 90% allocation study and the 3/14/2003 USBR's 90% B2 forecast.

⁹ These placeholders are based upon the CVP/SWP March forecast.

¹⁰ Of this amount, 27 TAF was expended for the 12/27-12/30/02 curtailment. The remaining amount is for the 12/31/02 portion of the 12/31/02-1/2/03 curtailment.

¹¹ Of this amount, approximately 9.5 TAF was expended for the 1/1-1/2/03 portion of the 12/31/02-1/2/03 curtailment; about 60 TAF was expended for the 1/15-1/20/03 curtailment; about 20 TAF was expended for the 1/25-1/28/03 curtailment.

¹² The CVP released the following: 4.645 TAF of water (which is the San Juan portion of the SGA) between 12/20-12/29/02 from Folsom Reservoir.

WY 2002/2003 EWA Accounting Summary
Based upon March 1 - 50% Exceedence Hydrology (EWA Backstop)
Assumptions: SWP Allocation ~ 74%; NOD Purchases - 61 TAF; SOD Purchases - 145 TAF

EWA NOD and SOD Storage																	
1	C/O	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
NOD ⁰	27 ^{*3}	1.7 ³	0.7 ³	6 ⁵						55 ⁶							62
SOD	37 ⁴																0

EWA Asset Acquisition in SWP San Luis																	
2	C/O	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
E/I Relaxation							41										41
EWA share of SWP gain																	0
Project Pumping to reduce EWA debt																	0
JPOD using excess flows																	0
JPOD using NOD storage																	0
Xfer NOD - Sacramento River ²											4 [*]	4 [*]	4 [*]				11
Xfer NOD - San Joaquin River ²																	0
SOD SWP Surface/GW Purchases									37 ⁴	36 ⁷	36 ⁷	36 ⁷	36 ⁷				182
Exchange of EWA assets																	0
Groundwater pumping SOD																	0
Exchange from CVP to SWP in SL																	0
Total Monthly EWA Assets		0	0	0	0	0	41	0	37	36	40	40	40	0	0	0	234

EWA Asset Acquisition in CVP San Luis																	
3	C/O	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
E/I Relaxation																	0
Project Pumping to reduce EWA debt							6										6
JPOD using excess flows																	0
JPOD using NOD storage																	0
Xfer NOD - Sacramento River ²				0.5 ³							16 ^{5,6}	16 ^{5,6}	16 ^{5,6}				49
Xfer NOD - San Joaquin River ²																	0
SOD CVP Surface/GW purchases																	0
Exchange of EWA assets																	0
Groundwater pumping																	0
Exchange from SWP to CVP in SL																	0
Total Monthly EWA Assets	0	0	0	1	0	0	6	0	0	0	16	16	16	0	0	0	55

EWA Expenditures at the Export Pumps																	
4	C/O	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
SWP export cuts ⁹				-32 ¹⁰	-90 ¹¹			-47	-138	-26							-333
CVP export cuts									-60	-7							-67
Total Expenditures	0	0	0	-32	-90	0	0	-47	-198	-33	0	0	0	0	0	0	-400

EWA End-of-Month Incremental Storage Changes																	
5	C/O	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
SWP in SL (without Source Shift)	11	0	0	-32	-90	0	41	-47	-101	10	40	40	40	0	0	0	-88
CVP in SL	-6	0	0	1	0	0	6	0	-60	-7	16	16	16	0	0	0	-18
NOD Storage ¹²	24	2	1	1	-2	0	0	0	0	55	-25	-25	-25	0	0	0	6
Groundwater SOD	37	0	0	0	-37	0	0	0	0	0	0	0	0	0	0	0	0
Total Incremental Storage Changes	62 *	2	1	-31	-128	0	47	-47	-161	58	31	31	31	0	0	0	-100

EWA End-of-Month Storage Balance at Various Sites																	
6	C/O	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
SWP in SL (without Source Shift)	11	11	11	-21	-111	-111	-70	-117	-218	-208	-168	-128	-88	-88	-88	-88	
CVP SL	-6	-6	-6	-6	-6	-6	0	0	-60	-67	-51	-34	-18	-18	-18	-18	
NOD Storage	24	26	27	28	26	26	26	26	26	81	56	31	6	6	6	6	
Groundwater SOD	37	37	37	37	0	0	0	0	0	0	0	0	0	0	0	0	
EWA Asset Balance	62 *	64	64	34	-91	-91	-44	-91	-252	-194	-163	-132	-100	-100	-100	-100	

San Luis Reservoir Storage Conditions																	
7	C/O	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Total Storage (base case) ⁸		645	783	1037	1554	1856	2024	1817	1416	998	738	573	639	693	823	988	
Encroachment																	
Total Storage (EWA case)		650	788	1010	1438	1739	1954	1700	1137	722	520	411	532	586	717	882	
MWD Source Shifting																	
Storage (with MWD source shifting)		650	788	1010	1438	1739	1954	1700	1137	722	520	411	532	586	717	882	

⁰ 2002 NOD Purchases = 135(YCWA) + 10(SGA). 2003 NOD Purchases = 185(YCWA) + 10(OWID). YCWA has firm 55 TAF; can exercise options for an additional amount (at present - another 60 (10+50) TAF).

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⁴ 2002 KCWA Transfer (SWP place of use)

⁵ 2003 OWID Transfer (Joint place of use)

⁶ 2003 YCWA Transfer (Joint place of use)

⁷ 2003 KCWA Transfer (SWP place of use)

⁸ Based upon the 3/10/2003 DWR's 50% allocation study and the 3/14/2003 USBR's 50% B2 forecast.

⁹ These placeholders are based upon the CVP March forecast.

¹⁰ Of this amount, 27 TAF was expended for the 12/27-12/30/02 curtailment. The remaining amount is for the 12/31/02 portion of the 12/31/02-1/2/03 curtailment.

¹¹ Of this amount, approximately 9.5 TAF was expended for the 1/1-1/2/03 portion of the 12/31/02-1/2/03 curtailment; about 60 TAF was expended for the 1/15-1/20/03 curtailment; about 20 TAF was expended for the 1/25-1/28/03 curtailment.

¹² The CVP released the following for instream benefits: 4.645 TAF of water (which is the San Juan portion of the SGA) between 12/20-12/29/02 from Folsom Reservoir.